Claims

1. A method in the treatment of surface-sized paper, in particular fine paper, in a finishing section of a paper machine, in which method a paper web (W) is first dried in a forward dryer section (D) of the paper machine in several successive downward open drying groups ($G_1 \ldots G_6$) that apply single-wire draw, after which the paper web (W) is finished in the finishing section, in which finishing section the web (W) is surface-sized in a surface-sizing unit (20) and the surface-sized paper web (W) is dried mainly by means of contact-free drying, at least partly by airborne web-dryers (31, 32, 34, 36; 51, 52, 55, 56; 70) or by means of impingement drying (72, 73, 74), **characterized** in that, in the method, the power of the airborne web-drying/impingement drying is regulated on both sides of the web (W) such that the tendency of curling created in the web (W) in the forward dryer section (D) can be controlled.

2. A method as claimed in claim 1, **characterized** in that at least 60 % of the drying of the after-dryer section is accomplished by means of contact-free drying.

3. A method as claimed in claim 1 or 2, **characterized** in that at least 60 % of the drying of the after-dryer section is accomplished by means of airborne web-drying/impingement drying.

4. A method in the treatment of surface-sized paper, in particular fine paper, in a finishing section of a paper machine, in which method a paper web (W) is first dried in a forward dryer section (D) of the paper machine in several successive downward open drying groups ($G_1 \ldots G_6$) that apply single-wire draw, after which the paper web (W) is finished in the finishing section, in which finishing section the web (W) is surface-sized in a surface-sizing unit (20) and the surface-sized paper web is dried at least partly by means of contact-free drying, at least partly by airborne web-dryers (31, 32, 34, 36, 37, 38; 51, 52, 55, 56; 70) and/or by means of impingement drying (72, 73, 74; 110), **characterized** in that, in the

method, the power of the airborne web-drying and/or impingement drying is regulated on both sides of the web (W) such that the tendency of curling created in the web (W) in the forward dryer section (D) can be controlled.

5. A method as claimed in any one of the preceding claims, **characterized** in that airborne web-drying is mainly used as the contact-free drying, so that the drying accomplished by means of the airborne web-dryers (31, 32, 34, 36; 51, 52, 55, 56; 70) is at least 70 % of the drying of the after-dryer section.

6. A method as claimed in any one of the preceding claims, **characterized** in that impingement drying (34; 54; 72, 73, 74) is used as the contact-free drying in the method.

7. A method as claimed in any one of the preceding claims, **characterized** in that air drying is used as the contact-free drying in the method.

8. A method as claimed in any one of the preceding claims, **characterized** in that, in the method, in the control of curl a steam box (45) is used which is placed in the after-dryer section in a position in which the web has substantially cooled, and by which steam box the tendency of curling of the web is further controlled.

9. A method as claimed in any one of the preceding claims, **characterized** in that profiling contact-free drying is used in the method for controlling the curl profile in the cross direction of the web.

10. A method as claimed in any one of the preceding claims, **characterized** in that, in the method, in the control of the curl profile, control parameters of the drying powers of drying cylinders are used in the drying cylinder groups that apply normal single-wire draw.

11. A finishing section of a paper machine in the treatment of surface-sized paper, in particular fine paper, in the paper finishing section, before which finishing section the paper machine comprises a forward dryer section (D) in which there are several successive downward open drying groups ($G_1 \ldots G_6$) that apply single-wire draw, which finishing section comprises surface-sizing devices (20) and drying means which are mainly based on contact-free drying, of which means at least some are airborne web-dryers/impingement dryers (31, 32, 35, 36; 51, 52, 55, 56; 70; 72, 73, 74), **characterized** in that the power of the airborne web-dryers/impingement dryers (31, 32, 35, 36; 51, 52, 55, 56; 70; 72, 73, 74) can be regulated such that the tendency of curling of the web can be controlled by the effect of drying applied on the different sides of the web (W).

12. A finishing section of a paper machine as claimed in claim 11, **characterized** in that at least 60 % of the drying of the after-dryer section is contact-free drying.

13. A finishing section of a paper machine as claimed in claim 11 or 12, **characterized** in that at least 60 % of the drying of the after-dryer section is airborne web-drying/impingement drying.

14. A finishing section of a paper machine as claimed in any one of claims 11 to 13, **characterized** in that the contact-free drying is mainly airborne web-drying, that the proportion of the airborne web-drying in the drying is at least 70 %.

15. A finishing section of a paper machine in the treatment of surface-sized paper, in particular fine paper, in the paper finishing section, before which finishing section the paper machine comprises a forward dryer section (D) in which there are several successive downward open drying groups ($G_1 \ldots G_6$) that apply single-wire draw, which finishing section comprises surface-sizing devices (20) and drying means which are at least partly based on contact-free drying, of which means at least some are airborne web-dryers and/or impingement dryers (31, 32, 35, 36, 37, 38; 51, 52, 55, 56; 70; 72, 73, 74, 110), **characterized** in that

the power of the airborne web-dryers/impingement dryers (31, 32, 35, 36, 37, 39; 51, 52, 55, 56; 70; 72, 73, 74; 110) can be regulated such that the tendency of curling of the web can be controlled by the effect of drying applied on the different sides of the web (W).

16. A finishing section of a paper machine as claimed in any one of claims 11 to 15, **characterized** in that the drying means comprise dryers (31, 32, 35, 36; 51, 52, 55, 56; 70; 72, 73, 74) that are based on airborne web-drying and impingement drying.

17. A finishing section of a paper machine as claimed in any one of claims 11 to 16, **characterized** in that the drying means comprise air dryers.

18. A finishing section of a paper machine as claimed in any one of claims 11 to 17, **characterized** in that a steam box (45) has been placed in the after-dryer section in a position in which the web has substantially cooled.

19. A finishing section of a paper machine as claimed in any one of claims 11 to 18, **characterized** in that the drying means are profiling dryers to control the curl profile in the cross direction of the web.

20. A finishing section of a paper machine as claimed in any one of claims 11 to 19, **characterized** in that the after-dryer section of the finishing section comprises at least two drying cylinder groups that apply normal single-wire draw.